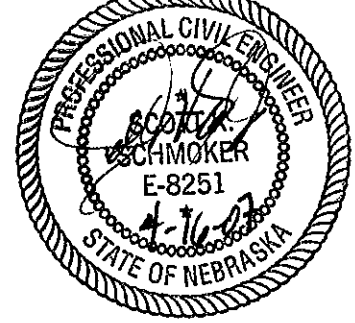

CITY OF LINCOLN, NEBRASKA 2007
54-INCH WATER TRANSMISSION MAIN
CARLOS DRIVE, FROM E. AVON LANE TO HOLDREGE
AND HOLDREGE, FROM CARLOS DRIVE TO N. 87TH STREET
PROJECT NO. 702279
SPECIFICATION NO. 07-124
ADDENDUM NO. 2

A. SCOPE

This Addendum No. 2 consists of AD2-1 through AD2-3. The following modifications shall be made to the Contract Documents for this project.

B. SPECIAL PROVISIONS

Section Special Provisions Cathodic Protection
Page 58, **Basis of Payment,** the first paragraph that begins "Cathodic Protection Anodes…" is deleted. Anodes are subsidiary to other items for which payment is made.

C. BIDDER QUESTIONS

The following questions have been received. The questions with the answer are listed below:

Q-1: KM Drawing Sheet 5 – Header Cable Notes - #5 If PCCP Pipe is used, anodes are not required so, why is header cable required? See Sheet 6 – CP Color Code – PCCP – which is correct?
A-1: The header cable is required for all materials, including PCCP. Future connection of anodes may be necessary for the PCCP; cable shall be provided for this purpose.

Q-2: Water Pipe Size 16", 12", 6" – What kind of Pipe? DI? PE? Steel? PCCP?
A-2: Pipe material for 16" main and smaller shall be in accordance with Chapter 23 of the City's Standard Specifications for Construction.

Q-3: If any of the copper water service lines are off the new main must be insulated from the new main at the tap?
A-3: There are no service connections to the new 54" transmission main.

Q-4: No separate bid item # for the CP material just for test stations and start-up and testing?
A-4: This is correct; all other CP items are subsidiary to items for which payment is made.

Q-5: CP Section – Products- calls for 48# Grade H-1 Mag Anodes, KM Sheet 5 calls for 50# Mag Anodes-48# correct?
A-5: The drawing sheet 5 is correct; anode sizing varies from segment to segment.

Q-6: Can 48# Hi-Potential Mag Anodes be substituted for the H-1 Anodes? Hi-Potential Anodes are an industry standard and H-1 is special order and therefore usually more expensive?
A-6: No, provide H-1 Anodes as specified.

Q-7: KM Drawings Sheet 7 calls for 2 bonds and handy caps per joint, also ref page 25 of special provisions, is the requirement different for PCCP pipe since the bond is under concrete?
A-7: No, the requirement is the same. The handy caps are to electrically protect/isolate the thermite weld. Concrete does not isolate the weld material.

Q-8: KM Drawings sheet 6 Reference electrodes are to be placed 1 foot above the pipe in soil. Can the reference electrode be placed 1 foot below the pipe in native soil?
A-8: No, install as specified/shown.

Q-9: CP Section under submittals wiring and schematic drawings are already provided in the KM drawings sheets 5, 6, 7, and 8?
A-9: Submit schematics as specified.

Q-10: Do they (KM Drawings) need to be copied and submitted?
A-10: Submit additional diagrams, details, and schematics to show details of installation, revisions, and demonstrate proper system functioning per the submittals paragraph.

Q-11: Shall test stations have concrete pads around them or are the test stations to be in the street?
A-11: They shall have pads; see the plan and profile sheets for test station locations.

Q-12: KM drawings sheet 6 anode placement note # 5 calls for no splices in the anode lead wire but the above drawing says the anodes must be a min of 10 feet from the pipe but also outside of pavement. A correct splice in the anode lead wire causes no additional resistance in the total needed length of the wire. Can splices be permitted in the anode lead wire if needed so that a standard lead wire length can be ordered?
A-12: No, provide lengths as required at each location for no splices.

Q-13: KM drawings no separate detail of fire hydrant cathodic protection requirements. Shall we use past KM procedure drawings?
A-13: Since all of the hydrants are on the 16" main which will not have cathodic protection, there is no requirement for protection of the fire hydrants.

Q-14: Does LWS or the Engineer have an as built as to, or do they know, if the existing 54" PCCP is Lined Cylinder Pipe or Embedded Cylinder Pipe? Also, what kind of coupling was used to connect the existing bulkhead?
A-14: We have located the shop drawings for the bulkhead and the pipe. It was Cretex pipe. Looks like it is embedded and the bulkhead is a spigot end with a locking ring.

Q-15: On Page 30 of the Plans, the alignment shows the initial 60 feet of 54" carrier transmission main pipe exiting eastward from the casing pipe located under 84th street to be deeper than 15 feet of cover. A backfill E' of 2500 (rather than the E' of 1000 shown in the Steel Pipe Specification) for that specific 60 foot length of trench zone will prevent any possible pipe deflection. Use of a flowable fill soil cement (which provides an E' in excess of 2500) as backfill material for that 60 feet run will satisfy the external load requirement. Therefore, we recommend that the maximum allowable E' of 1000 be increased to an E' of 2500 for that 60 foot alignment segment only. Is this acceptable?

A-15: Please bid the project with the specified E' of 1,000. A final review of this may be considered during the shop drawing phase so that any cathodic protection or other issues can be evaluated as a result of a possible change.